## **Systems Word Problems**

- 1. A recreation center is offering special prices on its pool passes and gym memberships for the summer. On the first day of the offering, a family paid \$96 for 4 pool passes and 2 gym memberships. Later that day, an individual bought a pool pass for herself, a pool pass for a friend, and 1 gym membership. She paid \$72.
  - a. Write a system of equations that represents the relationships between pool passes, gym memberships, and the costs. Be sure to state what each variable represents. Qle = 4x + 2y 72 = 2x + y (2) = 144 = 4x + 2y
  - b. Find the price of a pool pass and the price of a gym membership by solving the system algebraically.

2. A large pizza at Palanzio's Pizzeria costs \$6.80 plus \$0.90 for each topping. The cost of a large cheese pizza at Guido's Pizza is \$7.30 plus \$0.65 for each topping. How many toppings need to be added to a large cheese pizza from Palanzio's Pizzeria and Guido's Pizza in order for the pizzas to cost the same, not including tax?

Y: Total

Cost

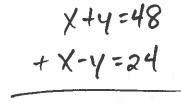
$$y = 6.8 + 0.9x$$
 (2.8.6)  
 $y = 7.3 + 0.65x$  2 +8ppmgs

3. The length of a rectangle is equal to triple the width. If the perimeter is 86 centimeters, what are the dimensions of the rectangle?

## **Systems Word Problems**

1. Monica and Michael both want to buy a scooter. Monica has already saved \$25 and plans to save \$5 per week. Michael has \$16 and plans to save \$8 per week. How many weeks will it take them to have saved the same amount and what is that amount?

2. The sum of two numbers is 48 and their difference is 24. What are the two numbers?





3. The length of Sally's garden is 4 meters greater than 3 times the width. The perimeter of the garden is 72 meters. What are the dimensions?

4. Hank has a total of \$175 in \$5 and \$20 bills. The number of \$5 bills he has is 3 more than 4 times the number of \$20 bills. How many of each type of bill does Hank have?

5. Leo 38 years older than Adam. Five times Adam's age, when decreased by 5 1 more than Leo's age. How old is each?